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Title of the Invention Inventor(s)  US 5,600,672	·		
Earliest Priority date to be used			
**************************************	TYPE of Search Text Litigation Other	***********  Databases Search  Dialog  STN  QuestelOrbit  LEXIS/NEXIS  Courtlink  Other	

### Query/Command: prt max legalall

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1/1 PLUSPAT - ©QUESTEL-ORBIT - image
PN
          図 US5600672 A 19970204 [US5600672]
TI
         (A) Communication system
PA
         (A) MATSUSHITA ELECTRIC IND CO LTD (JP)
PA<sub>0</sub>
          Matsushita Electric Industrial Company, Ltd., Osaka [JP]
IN
         (A) OSHIMA MITSUAKI (JP); SAKASHITA SEIJI (JP)
AP
         US24052194 19940510 [1994US-0240521]
FD
         C.I.P. of US857627 19920325 [1992US-0857627]
PR
          US24052194 19940510 [1994US-0240521]
          JP6279891 19910327 [1991JP-0062798]
          JP9581391 19910425 [1991JP-0095813]
          JP15565091 19910529 [1991JP-0155650]
          JP18223691 19910723 [1991JP-0182236]
          JP6073992 19920317 [1992JP-0060739]
          JP13298493 19930510 [1993JP-0132984]
          JP26161293 19930924 [1993JP-0261612]
          JP34997293 19931227 [1993JP-0349972]
          JP7966894 19940324 [1994JP-0079668]
          US85762792 19920325 [1992US-0857627]
IC
          (A) H04B-001/38 H04L-005/16
EC
          G11B-020/00P
          H04L-001/00B
          H04L-027/02
          H04L-027/04
          H04L-027/18M
          H04L-027/26M1
          H04L-027/26M1E
          H04L-027/34
          H04L-027/34M
          H04L-027/38N2
          H04N-005/44N
          H04N-007/24A
          H04N-007/24C14
          H04N-007/26E
          H04N-007/54
ICO
          S11B-023/28
          S11B-027/034
          S11B-027/10A1
          T04L-001/00B7C1
PCL
          ORIGINAL (O): 375219000; CROSS-REFERENCE (X): 375270000
          375301000 375321000
DT
          Basic
CT
          US5164963
          Shanmugam, "Digital and Analog Communication Systems" 1979, p. 272.
STG
          (A) United States patent
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AB At the transmitter side, carrier waves are modulated according to an input signal for producing relevant signal points in a signal space diagram. The input signal is divided into, two, first and second, data streams. The signal points are divided into signal point groups to which data of the first data stream are assigned. Also, data of the second data stream are assigned to the signal points of each signal point group. A difference in the transmission error rate between first and second data streams is developed by shifting the signal points to other positions in the space diagram expressed at least in the polar coordinate system. At the receiver side, the first and/or second data streams can be reconstructed from a received signal. In TV broadcast service, a TV signal is divided by a transmitter into low and high frequency band components which are designated as first and second data streams respectively. Upon receiving the TV signal, a receiver can reproduce only the low frequency band component or both the low and high frequency band components, depending on its capability. Furthermore, a communication system based on an OFDM system is utilized for data transmission of a plurality of subchannels, wherein the subchannels are differentiated by changing the length of a guard time slot or a carrier wave interval of a symbol transmission time slot, or changing the transmission electric power of the carrier.

1/1 LGST - ©EPO

PN - 🔞 US5600672 A 19970204 [US5600672]

**AP** - US24052194 19940510 [1994US-0240521]

ACT

19961010 US/AS02-A

ASSIGNMENT OF ASSIGNOR'S INTEREST

OWNER: MATSUSHITA ELECTRIC INDUSTRIAL CO., LTD. 1006, KAD;

EFFECTIVE DATE: 19960910

19961010 US/AS02-A

ASSIGNMENT OF ASSIGNOR'S INTEREST

OWNER: OSHIMA, MITSUAKI; EFFECTIVE DATE: 19960910

19961010 US/AS02-A

ASSIGNMENT OF ASSIGNOR'S INTEREST

OWNER: SAKASHITA, SEIJI; EFFECTIVE DATE: 19960910

19990420 US/RF-A

REISSUE APPLICATION FILED

EFFECTIVE DATE: 19990204

20001114 US/RF-A

REISSUE APPLICATION FILED

EFFECTIVE DATE: 20000915

20001128 US/RF-A

REISSUE APPLICATION FILED

**EFFECTIVE DATE: 20001012** 

20001226 US/RF-A

REISSUE APPLICATION FILED - EFFECTIVE DATE: 20001005

20010102 US/RF-A REISSUE APPLICATION FILED EFFECTIVE DATE: 20001012

20010130 US/RF-A REISSUE APPLICATION FILED EFFECTIVE DATE: 20001012

20010213 US/RF-A REISSUE APPLICATION FILED EFFECTIVE DATE: 20000929

20010313 US/RF-A REISSUE APPLICATION FILED EFFECTIVE DATE: 20000925

20010403 US/RF-A REISSUE APPLICATION FILED EFFECTIVE DATE: 20000925

20010501 US/RF-A REISSUE APPLICATION FILED EFFECTIVE DATE: 20000929

20010522 US/RF-A REISSUE APPLICATION FILED EFFECTIVE DATE: 20001005

20010605 US/RF-A REISSUE APPLICATION FILED EFFECTIVE DATE: 20001005

20020611 US/RF-A REISSUE APPLICATION FILED EFFECTIVE DATE: 20020429

20020702 US/RF-A REISSUE APPLICATION FILED EFFECTIVE DATE: 20020429

20021008 US/RF-A REISSUE APPLICATION FILED EFFECTIVE DATE: 20000921

20040113 US/RF-A REISSUE APPLICATION FILED EFFECTIVE DATE: 20031027 20040203 US/RF-A REISSUE APPLICATION FILED EFFECTIVE DATE: 20031022

20040413 US/RF-A REISSUE APPLICATION FILED EFFECTIVE DATE: 20031024

20040504 US/RF-A REISSUE APPLICATION FILED EFFECTIVE DATE: 20020209

20040928 US/RF-A REISSUE APPLICATION FILED EFFECTIVE DATE: 20040223

20041109 US/RF-A REISSUE APPLICATION FILED EFFECTIVE DATE: 20040220

20041214 US/RF-A REISSUE APPLICATION FILED EFFECTIVE DATE: 20040707

20041214 US/RF-A REISSUE APPLICATION FILED EFFECTIVE DATE: 20040701

20050301 US/RF-A REISSUE APPLICATION FILED EFFECTIVE DATE: 20040604

20050308 US/RF-A REISSUE APPLICATION FILED EFFECTIVE DATE: 20040805

20050510 US/RF-A REISSUE APPLICATION FILED EFFECTIVE DATE: 20030807

20050628 US/RF-A REISSUE APPLICATION FILED EFFECTIVE DATE: 20050119

**UP** - 2005-27

1/1 CRXX - @CLAIMS/RRX

ACT - 19990204 REISSUE REQUESTED

ISSUE DATE OF O.G.: 19990420.

REISSUE REQUEST NUMBER: 09/244037

**EXAMINATION GROUP RESPONSIBLE FOR REISSUEPROCESS: 2614** 

Reissue Patent Number:

20000915 REISSUE REQUESTED
ISSUE DATE OF O.G.: 20001114
REISSUE REQUEST NUMBER: 09/662695
EXAMINATION GROUP RESPONSIBLE FOR REISSUEPROCESS: 2614

Reissue Patent Number:

20000919 REISSUE REQUESTED ISSUE DATE OF O.G.: 20001114 REISSUE REQUEST NUMBER: 09/666012 EXAMINATION GROUP RESPONSIBLE FOR REISSUEPROCESS: 2614

Reissue Patent Number:

20000921 REISSUE REQUESTED ISSUE DATE OF O.G.: 20001114 REISSUE REQUEST NUMBER: 09/667438 EXAMINATION GROUP RESPONSIBLE FOR REISSUEPROCESS: 2614

Reissue Patent Number:

20000921 REISSUE REQUESTED
ISSUE DATE OF O.G.: 20010102
REISSUE REQUEST NUMBER: 09/667525
EXAMINATION GROUP RESPONSIBLE FOR REISSUEPROCESS: 2614

Reissue Patent Number:

20000921 REISSUE REQUESTED ISSUE DATE OF O.G.: 20021008

REISSUE REQUEST NUMBER: 09/667438 EXAMINATION GROUP RESPONSIBLE FOR REISSUEPROCESS: 2614

Reissue Patent Number:

20000925 REISSUE REQUESTED
ISSUE DATE OF O.G.: 20010313
REISSUE REQUEST NUMBER: 09/668068
EXAMINATION GROUP RESPONSIBLE FOR REISSUEPROCESS: 2614

Reissue Patent Number:

20000925 REISSUE REQUESTED ISSUE DATE OF O.G.: 20010403 REISSUE REQUEST NUMBER: 09/669916 EXAMINATION GROUP RESPONSIBLE FOR REISSUEPROCESS: 2614

Reissue Patent Number:

20000929 REISSUE REQUESTED ISSUE DATE OF O.G.: 20010213 REISSUE REQUEST NUMBER: 09/672948 EXAMINATION GROUP RESPONSIBLE FOR REISSUEPROCESS: 2614

Reissue Patent Number:

20000929 REISSUE REQUESTED
ISSUE DATE OF O.G.: 20010501
REISSUE REQUEST NUMBER: 09/672947
EXAMINATION GROUP RESPONSIBLE FOR REISSUEPROCESS: 2614

Reissue Patent Number:

20001005 REISSUE REQUESTED ISSUE DATE OF O.G.: 20001128 REISSUE REQUEST NUMBER: 09/678014

## **EXAMINATION GROUP RESPONSIBLE FOR REISSUEPROCESS: 2614**

Reissue Patent Number:

20001005 REISSUE REQUESTED
ISSUE DATE OF O.G.: 20001226
REISSUE REQUEST NUMBER: 09/677420
EXAMINATION GROUP RESPONSIBLE FOR REISSUEPROCESS: 2614

Reissue Patent Number:

20001005 REISSUE REQUESTED ISSUE DATE OF O.G.: 20001226 REISSUE REQUEST NUMBER: 09/677421 EXAMINATION GROUP RESPONSIBLE FOR REISSUEPROCESS: 2614

Reissue Patent Number:

20001005 REISSUE REQUESTED
ISSUE DATE OF O.G.: 20010522
REISSUE REQUEST NUMBER: 09/680176
EXAMINATION GROUP RESPONSIBLE FOR REISSUEPROCESS: 2614

Reissue Patent Number:

20001005 REISSUE REQUESTED
ISSUE DATE OF O.G.: 20010605
REISSUE REQUEST NUMBER: 09/680177
EXAMINATION GROUP RESPONSIBLE FOR REISSUEPROCESS: 2614

Reissue Patent Number:

20001012 REISSUE REQUESTED ISSUE DATE OF O.G.: 20001128 REISSUE REQUEST NUMBER: 09/686464 EXAMINATION GROUP RESPONSIBLE FOR REISSUEPROCESS: 2614 Reissue Patent Number:

20001012 REISSUE REQUESTED
ISSUE DATE OF O.G.: 20001128
REISSUE REQUEST NUMBER: 09/688028
EXAMINATION GROUP RESPONSIBLE FOR REISSUEPROCESS: 2614

Reissue Patent Number:

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ISSUE DATE OF O.G.: 20010102
REISSUE REQUEST NUMBER: 09/686466
EXAMINATION GROUP RESPONSIBLE FOR REISSUEPROCESS: 2614

Reissue Patent Number:

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ISSUE DATE OF O.G.: 20010102
REISSUE REQUEST NUMBER: 09/686467
EXAMINATION GROUP RESPONSIBLE FOR REISSUEPROCESS: 2614

Reissue Patent Number:

20001012 REISSUE REQUESTED
ISSUE DATE OF O.G.: 20010130
REISSUE REQUEST NUMBER: 09/686465
EXAMINATION GROUP RESPONSIBLE FOR REISSUEPROCESS: 2614

Reissue Patent Number:

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Reissue Patent Number:

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Reissue Patent Number:

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Reissue Patent Number:

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ISSUE DATE OF O.G.: 20050510
REISSUE REQUEST NUMBER: 10/635468
EXAMINATION GROUP RESPONSIBLE FOR REISSUEPROCESS: 2614

Reissue Patent Number:

20031022 REISSUE REQUESTED ISSUE DATE OF O.G.: 20040203 REISSUE REQUEST NUMBER: 10/690297 EXAMINATION GROUP RESPONSIBLE FOR REISSUEPROCESS: 2614 Reissue Patent Number:

20031024 REISSUE REQUESTED ISSUE DATE OF O.G.: 20040413

REISSUE REQUEST NUMBER: 10/692469

**EXAMINATION GROUP RESPONSIBLE FOR REISSUEPROCESS: 2614** 

Reissue Patent Number:

20031027 REISSUE REQUESTED
ISSUE DATE OF O.G.: 20040113
REISSUE REQUEST NUMBER: 10/693526
EXAMINATION GROUP RESPONSIBLE FOR REISSUEPROCESS: 2614

Reissue Patent Number:

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ISSUE DATE OF O.G.: 20041109
REISSUE REQUEST NUMBER: 10/782411
EXAMINATION GROUP RESPONSIBLE FOR REISSUEPROCESS: 2631

Reissue Patent Number:

20040223 REISSUE REQUESTED ISSUE DATE OF O.G.: 20040928 REISSUE REQUEST NUMBER: 10/783588 EXAMINATION GROUP RESPONSIBLE FOR REISSUEPROCESS: 2631

Reissue Patent Number:

20040604 REISSUE REQUESTED
ISSUE DATE OF O.G.: 20050301
REISSUE REQUEST NUMBER: 10/860666
EXAMINATION GROUP RESPONSIBLE FOR REISSUEPROCESS: 2614

Reissue Patent Number:

20040701 REISSUE REQUESTED
ISSUE DATE OF O.G.: 20041214
REISSUE REQUEST NUMBER: 2614
EXAMINATION GROUP RESPONSIBLE FOR REISSUEPROCESS:

Reissue Patent Number:

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ISSUE DATE OF O.G.: 20041214
REISSUE REQUEST NUMBER: 10/885572
EXAMINATION GROUP RESPONSIBLE FOR REISSUEPROCESS: 2614

Reissue Patent Number:

20040805 REISSUE REQUESTED ISSUE DATE OF O.G.: 20050308 REISSUE REQUEST NUMBER: 10/911680 EXAMINATION GROUP RESPONSIBLE FOR REISSUEPROCESS: 2614

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20050119 REISSUE REQUESTED ISSUE DATE OF O.G.: 20050628 REISSUE REQUEST NUMBER: 11/038006 EXAMINATION GROUP RESPONSIBLE FOR REISSUEPROCESS: 2614

Reissue Patent Number:

Search statement 2

UNITED STATES PATENT AND TRADEMARK OFFICE GRANTED PATENT

5600672

February 4, 1997

LEXIS-NEXIS
Library: PATENTS
File: ALL

### Communication system

REISSUE: Reissue Application filed Oct. 5, 2000 (O.G. Jun. 5, 2001) Ex. Gp.: 2614; Re. S.N. 09/680,177Reissue Application filed Oct. 5, 2000 (O.G. May 22, 2001) Ex. Gp.: 2614; Re. S.N. 09/680, 176Reissue Application filed Sep. 29, 2000 (O.G. May 1, 2001) Ex. Gp.: 2614; Re. S.N. 09/672,947Reissue Application filed Sep. 25, 2000 (O.G. Apr. 3, 2001) Ex. Gp.: 2614; Re. S. N. 09/669,916Reissue Application filed Sep. 25, 2000 (O.G. Mar. 13, 2001) Ex. Gp.: 2614; Re. S.N. 09/668, 068Reissue Application filed Sep. 29, 2000 (O.G. Feb. 13, 2001) Ex. Gp.: 2614; Re. S.N. 09/672,948Reissue Application filed Oct. 12, 2000 (O.G. Jan. 30, 2001) Ex. Gp.: 2614; Re. S.N. 09/686,465Reissue Application Filed Oct. 12, 2000 (O.G. Jan. 2, 2001) Ex. Gp.: 2614; Re. S. N. 09/686, 467Reissue Application Filed Oct. 12, 2000 (O.G. Jan. 2, 2001) Ex. Gp.: 2614; Re. S.N. 09/686,466Reissue Application Filed Oct. 12, 2000 (O.G. Jan. 2, 2001) Ex. Gp.: 2614; Re. S.N. 09/686,463Reissue Application Filed Sep. 21, 2000 (O.G. Jan. 2, 2001) Ex. Gp.: 2614; Re. S.N. 09/667, 525Reissue Application filed Oct. 5, 2000 (O.G. Dec. 26, 2000) Ex. Gp.: 2614; Re. S.N. 09/677,420Reissue Application filed Oct. 12, 2000 (O.G. Nov. 28, 2000) Ex., (O.G. June 5, 2000) (O.G. June 5, 2001) April 29, 2002 - Reissue Application filed Ex. Gp.: 2614; Re. S.N. 10/133,364 (O.G. June 11, 2002)

April 29, 2002 - Reissue Application filed Ex. Gp.: 2614; Re. S.N. 10/133,347 (O.G. July 2, 2002)

September 21, 2000 - Reissue Application filed Ex. Gp.: 2614; Re. S.N. 09/667,438 (O.G. October 8, 2002)

October 27, 2003 - Reissue Application filed Ex. Gp.: 2614; Re. S.N. 10/693,526 (O.G. January 13, 2004)

October 22, 2003 - Reissue Application filed Ex. Gp.: 2614; Re. S.N. 10/690,297 (O.G. February 3, 2004)

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5,600,672 OR 5600672

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